STANDARD FORM NO. 64

Office Memorandum CONFIDENTIAL UNITED STATES GOVERNMENT

TO : The Files - Contract 161, Task Order 1

DATE: 29 January 1960

25X1

FROM :

SUBJECT: (Trip Report - CR-17 Collection Receiver, 25 JAN 60)

1. On 25 January 1960 the undersigned and [redacted] 25X1
SPS/EA, visited the [redacted] 25X1
[redacted] to monitor progress on the CR-17 collection 25X1
receiver. Participating in the discussions were:

[redacted] 25X1

2. [redacted] is presently constructing a breadboard model of the 25X1
CR-17 which will be evaluated, modified where needed, and used as the basis for fabrication of the two prototype models to be delivered. The specifications of this receiver stipulate that the sensitivity of the pass bands be 40 db down 1 mc outside of the 3 db points. [redacted] has attempted to get this discrimination with the use of bandpass 25X1
RF filters and double tuned RF amplifier stages. Using conventional M-derived filtering sections, the contractor has been unable to get more than a 30 db attenuation at the specified points 1 mc outside of the pass band. Subsequent work using a Butterworth filter with 14 sections has produced considerably better results, although the filter has an insertion loss of 16 db. The specified points 1 mc outside of the pass bands are 40 and 43 db down, respectively.

3. At the present time the channel RF amplifiers are producing 50 db gain with an additional 30 db being provided by the video amplifiers. The wide band (front end) RF amplifier is currently giving 26 db gain which will probably be insufficient due to the rather high insertion loss caused by the Butterworth filter. The RF front end will, therefore, be reworked to produce at least 30 db gain in the prototype receivers. The contractor is using 4 mc pass bands in the CR-17 receiver which give 1½ mc between the 3 db points of adjacent pass bands. At the cross-over points the sensitivity will be 30 db down. This selectivity has been judged satisfactory to fulfill the operational requirements of the receiver. Total power consumption appears to be about 180 milliamps.

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[redacted]

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[redacted] The mechanical layout of the receiver and the module sub-assemblies have been completed and fabrication of the deliverable prototype models is scheduled to begin in February.

25X1

[redacted]

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